

MAEDA, K. et al.  
Appl. No. 10/705,775  
Amendment dated December 17, 2008  
Response to Office Action dated September 17, 2008

**REMARKS**

Upon entry of this amendment, claims 1-22 are pending. By the present amendment, claims 1-3, 11, 19 and 21 have been amended. Favorable reconsideration of the application is respectfully requested.

The objection to the drawings is believed to now be moot in view of the amendments to the claims. Therefore, reconsideration and withdrawal of the objection are respectfully requested.

Likewise, the objection to claim 18 is believed to now be moot in view of the amendments to the claims. Therefore, reconsideration and withdrawal of the objection are respectfully requested.

The rejection of claims 1-3, 18, 19 and 21 under 35 U.S.C. §112, first paragraph is respectfully traversed. Without acquiescing in the rejection, claims 1-3, 19 and 21 have been amended. Therefore, the rejection is moot, and reconsideration and withdrawal thereof are respectfully requested.

The rejection of claim 4 under 35 U.S.C. §112, second paragraph is rendered moot by the amendment to the claim from which claim 4 depends. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

The rejection of claims 11, 12, 15 and 18 under 35 U.S.C. §102(b) over Sunao (JP2000-181394) is respectfully traversed. Without acquiescing in the

rejection, claim 11 has been amended. Accordingly, the rejection will be discussed with respect to the claims as amended.

The reference to Sunao has been discussed at length in response to numerous previous Office Actions, and this discussion is summarized below. It is noted that independent claim 11, as amended, specifically recites that a shift register is provided in a data signal line driving circuit and the shift register generates a timing pulse with which a video signal is fetched. There is simply no teaching or suggestion anywhere in Sunao of the specifically claimed feature of a shift register provided in a data signal line driving circuit, wherein the shift register generates a timing pulse with which a video signal is fetched.

The claims are directed to configurations that enable reducing power consumption in low resolution driving as compared with high resolution driving when performing multiphase driving.

An illustrative example of an exemplary claimed embodiment of the invention is provided for convenience and understanding. For example, two data signal lines SL1 and SL2 adjacent to each other are connected to a single divisional video signal line DAT1, as illustrated, for example, in Figure 1, which is covered by exemplary claims. However, sampling signals are supplied from the circuits SMP1 and SMP2 respectively to the data signal lines SL1 and SL2. Likewise, the two data signal lines SL3 and SL4 adjacent to each other are

connected to the divisional video signal line DAT2. Further, sampling signals are supplied from the circuits SMP1 and SMP2 respectively to the data signal lines SL3 and SL4. In other words, a sampling signal is supplied from a single circuit to every other data line.

In this regard, as in the illustrated high resolution driving (see, e.g., Figures 6 and 7) and low resolution driving (see, e.g., Figures 8 and 9), the divisional video signals DAT1 and DAT2 are simultaneously sampled by every other data signal line to which the sampling signal is supplied from the same circuit.

Thus, in the case where the resolution is changed, the sampling cycle changes, but the sampling timing of the video signal in each data signal line does not change, as illustrated, for example, in Figures 6 and 7, and as expressly set forth in the claims. In the low resolution, the multiphase development can be carried out with respect to the video signal as in the high resolution, and the dot frequency can be reduced to  $\frac{1}{2}$  with respect to that in the high resolution, so it is possible to realize a reduction in power consumption in the low resolution.

In complete contrast, the technique of Sunao is such that plural data signal lines S1 to S4 are connected to a single image signal line V1 as illustrated in Figure 1, and sampling signals X1 to X4 are supplied to the data lines S1 to S4 respectively. As for the sampling signal, a timing at which the image signal is sampled by each data line in normal resolution (which may, for example,

correspond to high resolution described in the instant application) and a timing at which the image signal is sampled by each data line in horizontal resolution  $\frac{1}{2}$  (which may, for example, correspond to low resolution described in the instant application) are *different* from each other.

In Sunao, for example, at the time of normal resolution, the data signal lines respectively sample image signals at timings indicated by the sampling signals X1 to X4 of Figure 4 so as to sample the image signals at timings entirely *different* from each other, and at the time of horizontal resolution  $\frac{1}{2}$ , two data signal lines respectively sample image signals at timings indicated by sampling signals X1 to X4 so as to sample the image signals at the *same* timings.

Thus, Sunao is arranged so that the data signal lines are different from each other in a timing at which each image signal is sampled, as illustrated in Figures 4 and 5. Therefore, in the case where the resolution is changed, the data signal lines are different from each other in the timing at which each image signal is sampled as illustrated in Figures 4 and 5, so that it is impossible to use a *multiphased* image signal as claimed. Thus, unlike as with the claimed invention, at the time of low resolution, Sunao cannot reduce the power consumption caused by the multiphase.

In short, the technique of Sunao is such that data signal lines adjacent to each other in the block are respectively connected to different video signal lines as illustrated in Figure 1 thereof. Thus, in the case where it is necessary to

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simultaneously drive the data signal lines adjacent to each other, as in low resolution driving, the same video signal is transmitted to each of the video signal lines respectively connected to the data signal lines. Therefore, it is *impossible* to perform *multiphase* development as set forth in the claimed invention.

It is axiomatic that in order for a reference to anticipate a claim, the reference must disclose, teach or suggest each and every feature recited in the claim. As set forth above, Sunao fails to disclose, teach or suggest each and every feature of the claims. For example, there is no teaching or suggestion in Sunao of the specifically recited feature of a shift register that is provided in a data signal line driving circuit and the shift register generates a timing pulse with which a video signal is fetched. Therefore, Sunao cannot anticipate the claimed invention. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

The rejection of claims 1-4, 7, 10, 19 and 21 under 35 U.S.C. §103(a) over Sunao is respectfully traversed. Without acquiescing in the rejection, independent claims 1-3, 19 and 21 have been amended. Accordingly, the rejection will be discussed with respect to the claims as amended.

The reference to Sunao has been discussed at length above, and this discussion will not be repeated here. However, it is noted that independent claims 1-3, 19 and 21, as amended, specifically recite that a shift register is provided in a

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data signal line driving circuit and the shift register generates a timing pulse with which a video signal is fetched. There is simply no teaching or suggestion anywhere in Sunao of the specifically claimed feature of a shift register provided in a data signal line driving circuit, wherein the shift register generates a timing pulse with which a video signal is fetched.

The Office Action cites no art that remedies this glaring deficiency of Sunao. As such, the claimed invention is not rendered obvious in view of Sunao. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

The rejection of claims 5, 6, 8, 9, 13, 14, 16, 17, 20 and 22 under 35 U.S.C. §103(a) over Sunao in view of applicants' admitted prior art ("APA") and Kihara (U.S. Patent No. 5,781,171) is respectfully traversed. Without acquiescing in the rejection, it is noted that the independent claims from which these claims depend have all been amended. Accordingly, the rejection will be discussed with respect to the claims as amended.

It is respectfully submitted that any APA or Kihara fail to overcome the fundamental deficiencies noted above with respect to Sunao. Therefore, even if, *arguendo*, the proposed combination of references were proper, the proposed combination nevertheless fails to render the claims obvious. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

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In view of the foregoing, it is respectfully submitted that the entire application is in condition for allowance. Favorable reconsideration of the application and prompt allowance of the claims are earnestly solicited.

Should the Examiner deem that further issues require resolution prior to allowance, the Examiner is invited to contact the undersigned attorney of record at the telephone number set forth below.

Respectfully submitted,

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